UNIVERSITY OF CALIFORNIA, MERCED

Early parent-child sex communication, dating behaviors, and decision-making processes in subsequent sex initiation across Latina/o adolescents' generational status

A dissertation submitted in partial satisfaction of the requirements
for the degree Doctor of Philosophy

in

Psychological Sciences

by

Patricia Cabral

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To my parents who dreamed big and allowed me to dream bigger.
Solo con su apoyo fui capaz de lograr esto.

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ACKNOWLEGDMENTS

My successful journey throughout graduate school would not have been possible without the support and guidance of many important individuals.

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Summer 2015, 2016, & 2017	Psychological Sciences Graduate Student Research Award, Psychological Sciences Graduate Group – UC Merced.
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Cabral, P., Wallander, J.L., Elliott, M.N., Cuccaro, P.M., Peskin, M.F., & Schuster, M.A. (under review, *Annals of Behavioral Medicine*). Generational status, familismo, and socio-emotional competence in the link between neighborhood quality and risk behaviors for Latina adolescents.

Cabral, P., Wallander, J.L., Song, A.V., Elliott, M.N., Tortolero, S.R., Reisner, S.L., & Schuster, M.A. (2017, February). Generational status and social factors predicting initiation of partnered sexual activity among Latino/a youth. *Health Psychology, 36*, 168-179. doi: 10.1037/hea0000435.

Cabral, P., Meyer, H., & Ames, D. (2011). Effectiveness of yoga therapy as a complementary treatment for major psychiatric disorders: A meta-analysis. *The Primary Care Companion for CNS Disorders,13*. doi: 10.4088/PCC.10r01068.

CONFERENCE PRESENTATIONS

Cabral, P. & Wallander, J.L. (2018, April). *How early parental sex discussions moderate the influence of intentions on sex initiation in diverse adolescents*. Poster presented at the 39th Society of Behavioral Medicine (SBM) Annual Meeting. New Orleans, LA.

Cabral, P. & Wallander, J.L. (2017, April). *Latina adolescents' generational status, familismo, socio-emotional competence, and neighborhood quality in risk behaviors*. Poster presented at the 38th Society of Behavioral Medicine (SBM) Annual Meeting. San Diego, CA.

Baker, A.C., **Cabral, P.**, & Wallander, J.L. (2017, April). *Parental monitoring in the link between early dating initiation and dating violence among diverse adolescents*. Poster presented at the 38th Society of Behavioral Medicine (SBM) Annual Meeting. San Diego, CA.

Cabral, P. & Wallander, J.L. (2016, December). Early parenting practices influence on subsequent adolescent sexual risk: the mediating role of social-emotional competence. In D.J. Wiebe & J.L. Wallander (Chair), *Relationships and health across adolescence: Insights from longitudinal research*. Symposium accepted for presentation at the International Congress of Behavioral Medicine. Melbourne, Australia.

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Lagana`, L., Martinez-Alpizar, D., Williamson, J.J., Brown, B., Classen, N., Bloom, D., & **Cabral, P**. (2013, March). *Testing the Urinary Incontinence-Depression Link Using a New Measure*. Poster presented at the 34th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine. San Francisco, CA.

Cabral, P., Cox, K., Williamson, J.J., Briones, B., Greenough, C., & Lagana`, L. (2012, April). *Predicting Attitudes toward Condom Use among Ethnically Diverse Emerging Adults*. Poster presented at the Western Psychological Association 92nd Annual Convention. San Francisco, CA.

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Cox, K., **Cabral, P.**, Briones, B., Willliamson, J.J., Anderson, T., & Lagana`, L. (2012, March). *Relating Emerging Adults' Condom-Use Attitudes to Resisting Pressure for Unsafe Sex*. Poster presented at the Association for Women in Psychology 37th Annual Conference. Palm Springs, CA.

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Cabral, P. & Ames, D. (2009, October). *Effectiveness of Yoga as a Complementary Treatment for Major Psychiatric Disorders: A Meta-Analysis.* Paper presented at the 28th Annual NIMH Career Opportunities in Research Education and Training (COR) Colloquium. Albuquerque, NM.

Cabral, P. & Ames, D. (2009, August). *Effectiveness of Yoga as a Complementary Treatment for Major Psychiatric Disorders: A Meta-Analysis.* Paper presented at the UCLA Summer Programs for Undergraduate & Graduate Research Conference Presentations. Los Angeles, CA.

Cabral, P., Barton, A., Maldonado, J., Blanco, S., Son, J., Coleman, S., Zeledon, J., & Grant, S. (2009, April). *Perceptions of self-concept: Differences among four major ethnic groups.* Poster presented at the Western Psychological Association (WPA) Conference. Portland, OR.

Maldonado, J. & **Cabral, P.** (2009, April). *The effects of gender and ethnic minority groups on educational orientation.* Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD). Denver, CO.

Cabral, P., Plunkett, S. W., & Grant, S. (2008, November). *The influence of cultural factors on the depression of adolescent Latinos.* Poster presented at the Annual Biomedical Research Conference for Minority Students (ABRCMS). Orlando, FL.

RESEARCH EXPERIENCE

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Health Passages Dataset Lab, Dr. Jan Wallander
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2011, July –2013, July	**Laboratory Coordinator**
2008, Nov – 2011, June	**Research Assistant** *NIH-funded Behavioral Medicine Laboratory,* CSU Northridge – Dept. of Psychology
Summer 2009	**NSF-funded Summer Research Scholar** *Psychosocial Rehabilitation and Recovery Center – West LA VA Medical Center* Alliance for Graduate Education and the Professoriate (NSF – AGEP) – University of California, Los Angeles
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Proficient with SPSS (Versions 15.0- Current); Windows operating systems Microsoft Office v2007 - Current (Excel, Word, PowerPoint, Access).

Familiar with R v3 software; EQS v6.1 software; Mplus (v7.3 software – Current); qualitative grounded theory methodology; meta-analysis approach; structural equation modeling approach.

Fluent in Spanish (oral and wri**t**ten).

ABSTRACT

Early parent-child sex communication, dating behaviors, and decision-making processes in subsequent sex initiation across Latina/o adolescents' generational status

Patricia Cabral

Doctor of Philosophy, Psychological Sciences

University of California, Merced, 2018

Committee Chair: Jan L. Wallander

The objective of this study was to examine generational status differences in the longitudinal associations between early parent-child sex communication, dating behaviors, and subsequent sex initiation, as mediated by perceived peer norms, attitudes, and intentions among Latina/o adolescents. Using data from the *Healthy Passages*^{TM} project, Latina girls (n = 879) and Latino boys (n = 885) who were identified as 1st- (18%), 2nd- (58%), and 3rd- (24%) immigrant generational status reported on their dating behaviors and parent-child communication about sex at 5th grade (M age = 11.12), their perceived peer norms, attitudes, and intentions regarding sex at 7th grade (M age = 13.11), and if they had initiated sexual intercourse at 10th grade (M age = 16.06). Third-generation Latina girls were more likely than 1st- and 2nd-generation Latinas to have initiated sexual intercourse by 10th grade. Dating behaviors had a positive association with sex initiation for all generational status groups among Latino boys, but only among 1st-generation Latina girls. Moreover, mediating decision-making processes of peer norms, attitudes, and intentions differed for each group. Results demonstrate that pre-adolescent behaviors appear to have long-term influence on an adolescents' sexual behaviors. Acculturation differences may contribute to different ways in which adolescents decide to engage in sexual intercourse based on previous dating experience.

Keywords: Parent-child sex communication, dating behaviors, sex initiation, Latino immigrant paradox, decision-making processes.

Chapter 1: Introduction

Latina/o sexually transmitted infection (STI) prevalence is more than twice that of non-Latina/o Whites (CDC, 2015). To develop better prevention strategies, researchers have endeavored to identify psychosocial influences that may reduce sexual risk behaviors, particularly by delaying sex initiation (Scott et el., 2014). However, these factors are often confounded by the influence of cultural mechanisms, such as acculturation processes. Specifically, more acculturated Latina adolescents (3rd-generation) are more likely to initiate sexual intercourse before the end of high school than those who are less acculturated (1st-generation; Cabral et al., 2017). Yet, it remains unclear how these differences may be reflected within specific parental and peer processes of early dating behaviors and parent-child communication about sex, as well as mediating decision-making processes. In this paper, we attempt to illuminate the influence of acculturation differences in these associations.

Sexual intercourse initiation among Latina/o youth

Although sex initiation is a part of normative human development, early sexual intercourse initiation, defined in the U.S. by sexual debut before age 16 based on statistical distribution (Madkour et al., 2010), is associated with a subsequent pattern of engagement in many other sexual risk behaviors (e.g., inconsistent condom use, pregnancy; O'Donnell, O'Donnell, & Stueve, 2001). Also, early sexual intercourse initiation is associated with longer periods of risk taking in later adolescence and early adulthood (Pergamit et al., 2001).

Moreover, sexual intercourse initiation appears to occur earlier on average for Latina/o adolescents compared to White youth. In fact, Latina/o youth are twice as likely than their White peers to report engaging in sexual intercourse before age 13 (CDC, 2014). Therefore, delaying Latina/o sex initiation in adolescence may have significant public health implications. Research is needed to examine psychosocial and cultural processes that influence sexual intercourse initiation in this developmental period among Latina/os, to better inform prevention efforts.

To this end, parents and peers, including romantic partners, reflect two of the most proximal social influences, both of which are pivotal during adolescence (Brown, Mounts, Lamborn, & Steinberg, 1993). More specifically, parent-child communication has been linked to a reduced likelihood of sexual intercourse initiation (Whitaker, & Miller, 2000). Additionally, romantic relationships among Latina/o youth may also play an important role in the development of prevention programs (Child Trend, 2014). Yet, behavior patterns within early romantic relationships have not been explored in association to sexual risk behaviors. Moreover, these factors may influence Latina/o adolescents' sexual intercourse initiation through mediating decision-making processes, including intentions, peer norms, and attitudes (Ajzen, 1991). Given disparities and potentially distinct influences on sexual behaviors among racial/ethnic groups, we focus on influences on sexual intercourse initiation among Latina/o adolescents.

Parent-child communication about sex

Parents are an important source of sexual health information for youth. In fact, many Latina/o adolescents report learning "a lot" about sexual health issues from their parents (Hoff, Greene, & Davis, 2003). Yet, parents often have difficulty communicating about sex. Moreover, parents whose expectations and values differ from those of the majority culture, such as among many Latino families, may find discussing sex with their children especially challenging. Indeed, sexuality is often a focal point of familial tension among ethnic minority and immigrant families, whose expectations often conflict with U.S. norms regarding adolescent romantic activity (Barkley & Mosher, 1995). Specifically, Latino parents are less likely and more reluctant to talk to their children about sex than parents of other ethnic groups (Meneses et al., 2006).

Nevertheless, positive and frequent communication between parents and children about sexuality greatly helps young people to make healthy decisions (Scott et al., 2014). When parents and youth have good communication, youth report older age of first intercourse than their peers (Beckett et al., 2010). Therefore, parent-child communication about sex and its association with sexual intercourse initiation should be examined among Latina/o adolescents.

Dating behaviors and sexual intercourse

Dating and romantic relationships are a hallmark of adolescents' healthy development (Collins, 2003). However, when adolescents begin dating exclusively (going steady) at a younger age, they are more likely to have sex at an earlier age (Collins, Welsh, & Furman, 2009). In fact, romantic relationships are the context in which the majority of adolescents' sexual behavior occurs (Manning, Longmore, & Giordano, 2000). For example, receiving emotional support in a dating relationship can be a motivation to have sex in the near future (Binggeli, Montgomery, Lee, & Modeste, 2006). Also, as with sex, dating is being initiated at an earlier age today than in the past (McCabe, 1984), possibly contributing to early sexual intercourse initiation.

Moreover, among Latino families, parents are particularly cautious regarding their children's dating practices. In fact, Latino parents often prohibit or impose stringent rules regarding dating as strategies to protect daughters from premature sexual involvement (Raffaelli & Ontai, 2001; Villaruel, 1998). To many Latino parents, U.S.-style of dating is seen as violating traditional patterns of courtship, and early dating experiences among their children often occur without parental knowledge or permission (Raffaelli & Ontai, 2001). Yet, the link between dating behaviors and sexual intercourse initiation among Latina/o youth has not been examined.

Cognitive decision-making processes in sexual intercourse initiation

Parental and peer influences, being external to the adolescent, must be mediated by cognitive decision-making processes regarding sexual behaviors. Specifically, intentions to engage in behaviors are a major determinant in an adolescent's sexual behaviors (Buhi & Goodson, 2007). For example, among Spanish-dominant Latina/o, youth who reported intentions to have sexual intercourse in the next three months were more likely to have had sexual intercourse in the following three months (Villarruel et al., 2004). Moreover, intentions are determined by attitudes to behaviors and perceptions of

peer norms (Ajzen, 1991). Indeed, adolescents are more likely to initiate sexual intercourse if they have permissive or positive attitudes toward sex (O'Donnell et al., 2003). Also, when adolescents perceive their peers to be sexually active they tend to have higher intentions to initiate sexual intercourse and are more likely to initiate sexual intercourse (Flores, Tschann, & Marin, 2002). Moreover, it is important to examine these associations specifically among Latina/o youth as sexual attitudes and intentions may differ compared to non-Latino youth (Killoren, Updegraff, & Christopher, 2011).

Social processes can influence an adolescent's decision-making regarding sexual behaviors. For example, parent-child communication about sex is associated with youth's attitudes and intentions (Lederman, Chan, & Roberts-Gray, 2004). Indeed, given the centrality of the family in the Latino culture (Ruiz & Ransford, 2012), it is likely that families play a role in shaping Latina/o adolescents' sexual attitudes and intentions (Malcom et al., 2013). Also, some features of dating behaviors may influence decision-making processes regarding sexual intercourse initiation. In fact, among Latina/o adolescents, being in a romantic relationship is associated with higher intentions to have sex (Guilamo-Ramos et al., 2009).

To support healthy sexual behaviors and outcomes among Latina/o adolescents, we must understand both social influences and cognitive processes of decision-making on health behaviors. Specifically, parent-child discussions about sex and adolescents' early dating behaviors may influence sexual intercourse initiation through an adolescent's decision-making processes including intentions, peer norms, and attitudes, as reflected in the conceptual model guiding the proposed research (Figure 1). However, these associations may be further compounded by an adolescent's acculturation to the U.S, which has been associated with different rates of sexual risk behaviors (Afable-Munsuz & Brindis, 2006).

Immigrant paradox in Latina/o adolescent sexual intercourse initiation

Immigration plays an important role in the experience for many Latino families. Paradoxically, newly immigrated individuals tend to have an initial health advantage, despite having a predominantly lower socioeconomic status that is usually associated with poorer health outcomes (Franzini, Ribble, & Keddie, 2001). Then, as children in immigrant families acculturate to the U.S., their health outcomes appear to become less favorable, a phenomenon termed the *immigrant paradox* (Coll & Marks, 2012). This pattern is especially salient for health risk behaviors among less acculturated generations – generational status being a common approach to operationalize acculturation as a proxy variable. Specifically, 1st-generation Latina/os, who themselves migrated to the U.S., have been found less likely to engage in sexual risk behaviors, such as later age of first intercourse (Cabral et al., 2016), higher condom use, and lower number of sexual partners (Guarini et al., 2011) than Latina/os who are born in the U.S.

Social and cognitive processes may illuminate these paradoxical findings across Latina/o generational status. Specifically, parents and peers have both been found to mediate and moderate associations between Latina/o youth acculturation and sexual behaviors (e.g., Cabral et al., 2016; Schwartz et al., 2012). For example, among 1st- and 2nd-generation Latino youth, maternal communication about sex is a key predictor of risky sexual behaviors across generational status groups (Trejos-Castillo & Vazsonyi,

2009). Moreover, decision-making processes appear to differ across acculturation indices. Indeed, higher acculturated female Latina adolescents tend to express stronger intentions to have sex (Guilamo-Ramos et al., 2009). This may be further compounded by dating behaviors. For example, among higher acculturated adolescents, a lower likelihood of being in a romantic relationship is associated with lower intentions to have sex (Guilamo-Ramos et al., 2009). Yet, these longitudinal associations have not been examined together in a single model for sexual intercourse initiation of oral, vaginal, and anal intercourse among Latina/o adolescents across generational status.

Current study

The overriding aim of this study was to examine differences in sexual intercourse initiation (oral, vaginal, anal) across generational status among Latina female and Latino male adolescents. We also examined the influence of early parent-child communication about sex and pre-adolescent dating behaviors on subsequent sexual intercourse initiation, as mediated by related decision-making processes of intentions, perceived peer norms, and attitudes. Specifically, we hypothesized (**H1**) that less acculturated, as indicated by generational status, Latina/os will report lower prevalence of sexual intercourse initiation by 10^{th} grade. Moreover, we examined hypotheses about sexual intercourse initiation among Latina/o youth based on a conceptual model depicted in Figure 1, including: (**H2**) Whereas early parent-child sex communication will be negatively associated with subsequent sexual intercourse initiation, pre-adolescent dating behaviors will be positively associated with sexual intercourse initiation by 10^{th} grade; and (**H3**) intentions to initiate sex, perceived peer norms, and attitudes about sex will mediate these relationships (see H2). Due to differences across acculturation for sexual intercourse initiation, as a final aim of this study, we explored, in the absence of a strong basis for forming hypotheses, how these relationships (see H2 & H3) vary by generational status.

Chapter 2: Methodology

Data come from *Healthy Passages*, a multisite, longitudinal study of health behaviors and outcomes, and associated risk and protective factors (see Windle et al., 2004; Schuster et al., 2012). The cohort was assessed across 5th (2004-2006), 7th, and 10th grades.

Participants

Sampling for the Healthy Passages study included 5th graders in regular public school classrooms in three sites (Birmingham, Alabama; Los Angeles, California; Houston, Texas). Child participants were selected using a two-stage probability sampling procedure. Public schools within the three study site communities were randomly selected with probabilities proportionate to a weighted measure of the scarcity of a school's students relative to race/ethnicity targets to ensure adequate sample sizes of Black, Latina/o, and White students. The sample was selected to represent the three largest racial/ethnic groups within the U.S. (Black, Hispanic/Latino, and non-Hispanic White). All 5th grade students within selected schools were invited to participate (see Schuster et al., 2012). Among families who provided permission to be contacted and completed interviews in 5th grade (N = 5147; 2607 girls; 1813 Latina/o), 4773 (93%) and 4521 (89%) completed the 7th and 10th grade assessments, respectively.

Because of a difference in the protocol used to collect data regarding dating behaviors at the Birmingham site, the data analytic sample (n = 1,764; 49.8% girls) consisted of Latina/o youth from the Los Angeles and Houston sites only (excluding n = 26 from Birmingham) who completed all three waves, and could be classified as first- (18%), second- (58%), or third- (24%) generation (n = 23 could not be classified). Excluded Latina/o participants (n = 49) did not differ from the analysis sample on demographic variables. The analysis sample mean age was 11.13 (SD = 0.59) at 5th grade, 13.11 (SD = 0.61) at 7th grade, and 15.66 (SD = 0.65) at 10th grade. Selected sample characteristics are shown in Table 1 (see Schuster et al., 2012, for more details).

Procedure

Fifth-grade students and one of their parents were recruited through school classrooms. Two trained interviewers completed the full assessment protocol with a child and one of his/her parents (mother, 88%; father, 6%; other, 6%) at their home or a research facility at each of the three assessments corresponding to when the vast majority of child participants were enrolled in 5th, 7th, and 10th grade. Retention was 89% by 10th grade. The parent provided signed informed consent, and the child signed assent at each assessment. Interviews were conducted using both computer-assisted personal and audio self-interview procedures in either English or Spanish with the child and parent separated in private spaces (see Windle et al., 2004). Sensitive data, including information on sexual behaviors, were collected by audio computer assisted self-interview (CASI) method. The majority of child interviews were conducted in English (82% mainly or entirely in English; 18% half or more in Spanish). Third-generation child participants were the largest group to complete the interview mainly or entirely in English (99%),

followed by second- (85%), and first- (51%) generation. Institutional review boards at each study site and the Centers for Disease Control and Prevention approved the study.

Measures

Sexual intercourse initiation. A dichotomous (yes/no) measure assessed partnered sexual intercourse initiation across oral (27.2% initiated by 10th grade), vaginal (26.4%), and anal (9.6%) sex by 10th grade. Adolescents indicated whether they had ever performed or received oral sex, had vaginal intercourse, or had anal intercourse. Adolescents who responded yes to any of these questions were coded as having initiated sexual intercourse by 10th grade.

Parent-child communication about sex. Parent-child sex communication was assessed at 5th grade using six items, as reported by the child. Two items assessed the child's discussions with their mother and father about reproduction (i.e., *How many times has your mother/father ever talked to you about how babies are made or where babies come from?*). Four items assessed discussions with each parent about sexual activity (*How many times has your mother/father ever talked to you about what sex is?*; *How many times has your mother/father ever told you that you should wait to have sex until you are married?*). Responses were on a three-point scale (*1 = Never talked about it*; *2 = Talked about it once or twice*; *3 = Talked about it lots of times*).

Dating behaviors. Child participants' early dating behaviors were assessed at 5th grade based on five dating behaviors. Respondents indicated if they had ever: (a) held hands with a boyfriend/girlfriend, (b) told a boyfriend/girlfriend they love him/her, (c) kissed a boyfriend/girlfriend, (d) been left alone with a boyfriend/girlfriend, or (e) had their hands under a boyfriend/girlfriend's clothes or vice versa. Responses were dichotomized (*0 = No, 1 = Yes*).

Sexual decision-making processes. Adolescents reported their (a) intentions, (b) perceived peer norms, and (c) attitudes regarding sexual intercourse, at 7th grade. (a) Intentions were measured as a single item based on the adolescent's response to whether they intended to wait until the end of high school or marriage to have [vaginal] intercourse (e.g., *Do you intend to wait until the end of high school before having vaginal intercourse [again]?*). Responses were on a four-point scale (*0 = Yes, definitely* to *3 = No, definitely not*). (b) Perceived peer norms were assessed as a single item by asking adolescents about their friend's sexual initiation (i.e., *How many of your friends' have had oral / vaginal sex?*). Responses were dichotomized (*0 = None*; *1 = at least one or some friends*). (c) Attitudes about sexual intercourse were assessed using five items in which adolescents indicated their agreement with different statement regarding sex (e.g., *It is ok for people your age to have vaginal intercourse with a casual friend*; *It is ok for people your age to have vaginal intercourse if they are in love*). Responses were on a four-point Likert scale (*1 = Strongly disagree* to *4 = Strongly agree*).

Generational status. Generational status was measured at 5th grade by asking the parent whether she/he and her/his child were born inside or outside the U.S. Using the common classification scheme of Coll and Marks (2012), if both the child and the parent were born outside the U.S., the child was classified as first-generation. If the child was born in the U.S. but the parent was born outside the U.S., the child was classified as second-generation. If both the child and the parent were born inside the U.S., the child was classified as third-generation.

Covariates. We controlled for child's age at 5th grade, household income (9 categories), and parental household composition (one- vs. two-parent household) for extraneous influence on early dating behaviors and parent-child sex communication. Additionally, we controlled for child's age at 10th grade when sexual intercourse initiation was the outcome.

Statistical Analysis

All analyses were performed using complex sampling weights to account for the complex survey design, including the effects of design, non-response, and attrition over time, clustering of youth within schools in each area, and stratification by site (see Schuster et al., 2012). Missing in later waves (intentions = 48%; all other variables < 10%) was addressed using multiple imputation, based on 50 imputed data sets. Using SPSS v.24, chi-square analysis and t-tests were used to examine differences among observed variables across generational status, in part to address hypothesis 1. Using Mplus v.7 (Muthén & Muthén, 1998-2015), a series of sequential tests were conducted to address hypotheses 2 to 3 and the final exploratory aim: (1) initial confirmatory factor analysis, to assess the adequacy of the hypothesized measurement model; (2) followed by measurement invariance (or equivalency) tests; (3) test of the overall structural equation model (SEM) among the whole Latina/o sample; and (4) multiple group structural equations model (SEM) analyses to test the model fit and support for hypothesized paths across generational status (Byrne, 2012; Byrne, Shavelson, & Muthén, 1989; Kline, 2005). SEM analyses controlled for household income, household parental composition, and age at 5th on each exogenous variable (i.e., parent-child sex communication and dating behaviors), as well as age at 10th grade on the outcome. Finally, all analyses were conducted separately for girls and boys due to marked differences in sexual intercourse initiation between gender.

After each latent variable was evaluated using confirmatory factor analysis, invariance (or equivalency) tests of the measurement model for were conducted across generational status groups. This step investigates whether the factor structure of the measurement model for latent variables was equivalent across groups. Thus, invariance testing was then conducted comparing consecutively constrained models that build on each successful level of previous invariance test, reflecting (1) configural, (2) metric, and (3) scalar invariance (Byrne, 2012). Configural invariance indicates whether observed variables conform to the same feature across groups, metric invariance determines whether loadings for each observed variable on its posited latent factor are equivalent, and finally, scalar invariance examines whether the intercepts of each observed variable are equal. In comparing models, the Chi square difference test was used. Subsequently, in

testing the measurement model three goodness-of-fit indices are examined to determine how well the model reproduced characteristics of the observed data: Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). CFI and TLI values above 0.95 are considered as adequate fit while values greater than 0.90 are considered acceptable fit. RMSEA values of 0.05 or less indicate a close fit, and values of 0.08 or less indicate adequate fit (Hu & Bentler, 1998).

Finally, to investigate whether generational status moderated the hypothesized relationships, multiple group SEM analysis was conducted. This involved testing whether path coefficients between latent factors of the hypothesized model (Fig. 1) differ across generation status groups. Specifically, differences were examined across generational status for girls and boys separately, resulting in two separate multigroup analyses.

Chapter 3: Results

Means, standard deviations, and prevalence across generational status groups among girls and boys for variables of interest are shown in Table 1. Prevalence of sex initiation across demographic and categorical predictive variables are shown in Table 2. See Table 3 for intercorrelations.

Sexual Intercourse Initiation Differences

Group differences among observed variables are detailed in Table 2. Highlighting significant differences in sexual intercourse initiation across some of the variables of interest here, 1st- (OR = 0.59, 95% CI [0.38, 0.90], $p = .02$) and 2nd-generation (OR = 0.64, 95% CI [0.46, 0.90], $p = .01$) Latinas were about half as likely to have initiated sexual intercourse by 10th grade in comparison to 3rd–generation Latinas. There were no significant differences for Latino boys across generational status. Latina girls and Latino boys who reported holding hands as a dating behavior at 5th grade (girls OR = 1.77, 95% CI [1.10, 2.85], $p < .001$; boys OR = 1.56, 95% CI [1.00, 2.47], $p = .05$) as well as those who perceived at least one friend to have initiated sexual intercourse (i.e., peer norms) at 7th grade (girls OR = 3.66, 95% CI [2.47, 5.43], $p < .001$; boys OR = 7.17, 95% CI [5.12, 10.05], $p < .001$) were more likely to have initiated sexual intercourse by 10th grade. Also, boys who engaged in kissing (OR = 2.07, 95% CI [1.32, 3.24], $p < .01$) and saying "I love you" (OR = 1.65, 95% CI [1.01, 2.69], $p < .05$) were more likely to have initiated sexual intercourse by 10th grade.

Additionally, Latino boys who reported communicating with their mother (OR = 0.79, 95% CI [0.65, 0.97], $p = .02$) and with their father (OR = 0.75, 95% CI [0.61, 0.94], $p = .01$) in 5th grade about waiting to have sex were significantly less likely to initiate sexual intercourse by 10th grade. Latina girls who reported communicating about what sex is with their mothers in 5th grade were significantly less likely to have initiated sexual intercourse by 10th grade (OR = 0.71, 95% CI [0.51, 0.98], $p = .04$). Latina girls and Latino boys who reported higher positive attitudes toward sex with a casual friend in 7th grade (girls OR = 1.49, 95% CI [1.16, 1.92], $p < .01$; boys OR = 1.29, 95% CI [1.03, 1.61], $p = .03$) and acceptability of sex among people who are over 18 and not married (girls OR = 1.25, 95% CI [1.00, 1.57], $p < .05$; boys OR = 1.35, 95% CI [1.12, 1.63], $p < .01$) were more likely to have initiated sexual intercourse by 10th grade. Also, Latino boys who reported in 7th grade higher positive attitudes about the acceptability of sex with a condom (OR = 1.54, 95% CI [1.28, 1.85], $p < .001$) were more likely to have initiated sexual intercourse by 10th grade.

Evaluation of the Measurement Model

Confirmatory factor analysis (CFA) of latent variables indicated adequate fit to the data for: dating behaviors for both girls ($\chi^2 = 14.91$, $df = 5$, CFI = .99, TLI = .99, RMSEA = .05) and boys ($\chi^2 = 6.31$, $df = 5$, CFI = .99, TLI = .99, RMSEA = .02); parent-child sex communication for both girls ($\chi^2 = 165.12$, $df = 9$, CFI = .96, TLI = .94, RMSEA = .04) and boys ($\chi^2 = 342.24$, $df = 9$, CFI = .92, TLI = .95, RMSEA = .05); and attitudes about sex for both girls ($\chi^2 = 10.77$, $df = 5$, CFI = .99, TLI = .99, RMSEA = .09)

and boys (χ^2 = 12.04, *df* = 5, CFI = .99, TLI = .99, RMSEA = .04). Factor loadings for the measurement model are shown in Table 3.

Invariance of the Measurement Model across Generational Status

Invariance of the measurement model across generational status groups was examined by comparing consecutively constrained invariant models (see Statistical Analysis): Among girls, initial invariance test results showed that the comparison between the unconstrained configural invariance model (Model 1; χ^2 = 941.99, *df* = 687) and metric invariance model (Model 2; factor loadings and variances constrained) yielded a significant difference ($\Delta\chi^2$ (*df*) = 18.79 (6), $p < 0.01$). Then, one parameter was identified as non-invariant (i.e., parent-child sex communication variance) and released in Model 2a. Subsequently, the comparison between Model 2a and the scalar invariance model (Model 3; thresholds constrained) did not yield a difference ($\Delta\chi^2$ (*df*) = 0.0 (0), *ns*). Among boys, results showed that the comparison between the unconstrained configural invariance model (Model 1; χ^2 = 1014.26, *df* =656) and metric invariance model (Model 2; factor loadings and variances constrained) yielded a significant difference: ($\Delta\chi^2$ (*df*) = 18.82 (6), $p < 0.01$). Then, one parameter (dating behaviors) was identified as non-invariant (i.e., dating behaviors variance) and released in Model 2a. Subsequently, the comparison between Model 2a and the scalar invariance model (Model 3; thresholds constrained) did not yield a difference: ($\Delta\chi^2$ (*df*) = 0.0 (0), *ns*). Thus, partial scalar invariance (equivalence) was obtained for the measurement model across generational status groups for both genders and was used in multi-group comparisons among girls and boys (Byrne, Shavelson, & Muthén, 1989).

Multi-group Comparisons of the Structural Model across Generational Status

Prior to invariance testing, a baseline model was tested separately for each generational status group among girls and boys, each of which showed adequate fit. Among girls: 1st–generation, χ^2 (*df*) = 298.74 (223), CFI = .95, TLI = .94, RMSEA = .04; 2nd–generation, χ^2 (*df*) = 361.72 (223), CFI = .97 TLI = .96, RMSEA = .04; and 3rd–generation, χ^2 (*df*) = 304.65 (223), CFI = .96, TLI = .95, RMSEA = .04. Among boys: 1st–generation, χ^2 (*df*) = 329.13 (202), CFI = .94, TLI = .93, RMSEA = .05; 2nd–generation, χ^2 (*df*) = 341.02 (202), CFI = .97, TLI = .97, RMSEA = .03; and 3rd–generation, χ^2 (*df*) = 290.06 (202), CFI = .95, TLI = .94, RMSEA = .05.

Based on the scalar partially invariant measurement model, we tested the invariance of path coefficients among girls and boys separately. First, joint unconstrained models for all groups were estimated (i.e. path coefficients are allowed to vary freely across groups). Among girls, the structural model (M1) that freely estimated all paths across groups showed acceptable fit, χ^2 (*df*) = 1019.65 (725), CFI = 0.96, TLI = .96, and RMSEA = 0.04, as it also did among boys, χ^2 (*df*) = 1076.35 (660), CFI = 0.96, TLI = .95, and RMSEA = .05. Second, a partially constrained model (M2), in which only the paths that were either significant or non-significant for all generational status groups were constrained to be equal across generational status groups. All other paths, including covariances among exogenous variables and control variables, were left freely estimated (Kline, 2005). Among girls, the partially constrained model (M2) had good fit to the data: χ^2 (*df*) = 1025.18 (737), CFI = .96, TLI = .96, RMSEA = .04. The χ^2 difference test

comparing the partially constrained model (M2) to the unconstrained model (M1) indicated they were not significantly different: $\Delta\chi^2$ (*df*) = 5.53 (12), $p > .10$, *ns*. Among boys, the partially constrained model (M2) had good fit to the data: χ^2 (*df*) = 1015.77 (674), CFI = .96, TLI = .96, RMSEA = .04. The χ^2 difference test comparing the partially constrained model (M2) to the unconstrained model (M1) indicated they were significantly different: $\Delta\chi^2$ (*df*) = 60.58 (14), $p < .01$. Thus, the partially constrained model (M2) was selected as the final model for both girls and boys because it was more parsimonious. Standardized path coefficients are shown in Figure 2.

As a final test of significant differences in path coefficients among the generational status groups among girls and boys, several additional models were tested in which paths that differed in significance across groups were constrained to be equal across groups (Kline, 2005). Each path was tested individually based on the partially constrained scalar invariant model (M2; Kline, 2005). Among Latino boys, this strategy revealed that paths from dating behaviors to intentions ($\Delta\chi^2$ (*df*) = 69.07 (1), $p < .001$); attitudes to intentions ($\Delta\chi^2$ (*df*) = 21.06 (1), $p < .001$) and sexual intercourse initiation ($\Delta\chi^2$ (*df*) = 20.53 (1), $p < .001$); and, intentions to sexual intercourse initiation ($\Delta\chi^2$ (*df*) = 24.63 (1), $p < .001$) differed significantly between 3rd- and 1st-generation, resulting in significant χ^2 differences when compared to the partially constrained model (M2). With the exclusion of the path from dating behaviors to intentions, which also differed significantly between 2nd- and 3rd-generation ($\Delta\chi^2$ (*df*) = 19.25 (1), $p < .001$), these paths also differed significantly between 1st- and 2nd-generation (attitude to intentions, $\Delta\chi^2$ (*df*) = 10.52 (1), $p < .01$; attitude to sexual intercourse initiation, $\Delta\chi^2$ (*df*) = 4.55 (1), $p < .05$; intentions to sexual intercourse initiation, $\Delta\chi^2$ (*df*) = 32.23 (1), $p < .001$). Among Latina girls, the path from peer norms to sexual intercourse initiation ($\Delta\chi^2$ (*df*) = 6.09 (1), $p < .05$), differed significantly between 1st- and 3rd-generation, resulting in significant χ^2 difference when compared to the partially constrained model (M2). Additionally, the path from dating behaviors to intentions ($\Delta\chi^2$ (*df*) = 11.25 (1), $p < .001$) differed significantly between 1st- and 2nd-generation Latina girls.

The final model (see Fig. 2) indicated that, for 1st-generation Latino boys only, attitudes and intentions mediated the association between dating behaviors and sexual intercourse initiation. Specifically, attitudes mediated the association between dating behaviors and intentions ($\beta = .20$, S.E. = .08, $p = .01$); intentions mediated the association between attitudes and sexual intercourse initiation ($\beta = .19$, S.E. = .08, $p < .05$); and, finally, attitudes and intentions together mediated the association between dating behaviors and sexual intercourse initiation ($\beta = .08$, S.E. = .04, $p < .05$). Also, attitudes mediated the association between dating behaviors and sexual intercourse initiation for 2nd-generation boys ($\beta = .14$, S.E. = .04, $p < .001$) and girls ($\beta = .05$, S.E. = .03, $p = .05$), and 3rd-generation boys ($\beta = .10$, S.E. = .05, $p = .05$) and girls ($\beta = .10$, S.E. = .05, $p < .05$). Finally, peer norms mediated the association between dating behaviors and sexual intercourse initiation among 3rd-generation Latina girls ($\beta = .07$, S.E. = .04, $p = .05$).

Discussion

The first hypothesis was supported for girls, in that less acculturated Latinas (i.e., 1st-and 2nd-generation) reported a lower prevalence of sexual intercourse initiation than 3rd-generation girls, but not for Latino boys. These generational status differences among Latina girls and the lack of evidence for the immigrant paradox among Latino boys are consistent with previous work on the immigrant paradox in sexual behaviors (Guarini et al., 2011; Haderxhanaj et al., 2015). Also consistent with previous research, our results demonstrate that Latino boys have higher levels of sexual risk behaviors than Latina girls (Guarini et al., 2011). The findings partially supported hypotheses two and three (see Fig. 1) about the joint influences of early parent-child sex communication and dating behaviors on subsequent sexual intercourse initiation (five years later), and the mediation of decision-making processes in these relationships among Latina/o adolescents. Specifically, the overall model, which had good fit for all groups, demonstrated that, for 1st-generation girls and boys of all generational status groups, engaging in pre-adolescent dating behaviors was associated with a greater likelihood of sexual intercourse initiation by 10th grade. Moreover, for girls and boys of all generational status groups, engaging in pre-adolescent dating behaviors was associated with a greater likelihood of perceived sexual intercourse initiation among peers (i.e., peer norms) and higher positive attitudes about sexual intercourse. Also, for all groups except 3rd-generation boys, such positive attitudes were associated with a greater likelihood of sexual intercourse initiation. Findings regarding each hypothesis are discussed in turn.

First, results demonstrated that early dating behaviors was positively associated with subsequent sexual intercourse initiation for most groups, partially supporting hypothesis 2. It may be that the earlier an adolescent begins to engage in dating behaviors provides a longer period of opportunity for exploring sexual behaviors. That is, dating relationships, which often involve sexual attraction, may further encourage exploration of sexual behaviors (Furman et al., 1999). Early life relationships may build confidence about sexual interactions (Wood, Avellar, & Goesling, 2008) and, further, reinforce interest in sexual behaviors. Moreover, the direct association between dating behaviors and sexual intercourse initiation was consistent across generational status for boys, but was only significant for 1st-generation girls. This suggests there are no acculturation-related differences that Latino boys experience that may impede their exploration of sexual behaviors when they have begun dating earlier in life. It may be that, for boys, there are no differences in expectations whether primarily adhering to traditional Latino or U.S. cultural norms regarding dating and sex. Conversely, for girls, there appears to not be a protective immigrant experience in line with the immigrant paradox. Perhaps differences in the way that less acculturated Latina girls are brought up regarding dating and sexual behaviors in comparison to more acculturated girls may be counterproductive to delaying sexual intercourse initiation. It may also be that early dating behaviors among less acculturated Latina girls is particularly detrimental to their engagement in sexual interactions as this is breaking from traditional norms in which romantic exploration is curtailed (Raffaelli & Ontai, 2001). Essentially, by breaking with traditional cultural values regarding dating, Latina girls do not experience the protective mechanism typically associated with lesser acculturation.

Second, whereas the association between dating behaviors and sexual intercourse initiation was mediated by both attitudes and intentions for 1st-generation Latino boys, it was only mediated by attitudes for 2nd- and 3rd-generation Latina girls and Latino boys. Also, this association was mediated by peer norms for 3rd-generation Latina girls. For most groups, attitudes were both a direct predictor and mediator of sexual intercourse initiation. This suggests that, independent of acculturation differences, attitudes are an important process in sexual intercourse decision-making. Moreover, Latina/os may share similar sexual attitudes to White youth (Ahrold, & Meston, 2010). This is an unexpected finding as Latina/os typically have more restrictive attitudes about sex, particularly depending on their acculturation (Eisenman & Dantzker, 2006). However, findings of acculturation differences in sexual attitudes in previous research have been based on Latino-dominant populations (e.g., Eisenman & Dantzker, 2006). It may be that, for Latina/o youth who are more exposed to U.S. dominant cultural norms, attitudes are more likely to be derived from the dominant culture compared to others who are less exposed to such attitudes, and rather be more aligned to attitudes of their cultural heritage.

Yet, the results also demonstrated differences across groups regarding peer norms and intentions. These generational status differences in mediating decision-making factors may suggest that both girls and boys of different generational status rely on different decision-making processes related to sexual intercourse, depending on their acculturative experiences. In fact, cognitions may shift or play a role in acculturation processes and account for some of the observed generational status differences among Latina/os (Abraído-Lanza, Echeverría, & Flórez, 2016). For example, more acculturated Latina/o adolescents tend to have greater intentions to engage in risky behaviors than those less acculturated (Blake et al., 2001). Perhaps less acculturated Latino youth are more likely to hold values and ideas that influence sexual decisions that are more aligned with traditional cultural norms than more acculturated adolescents, such that this acts as a protective mechanism. Yet, the findings would also suggest that, despite aligning their attitudes, intentions, and norms to traditional cultural scripts, the protective mechanism often associated with holding on to traditional cultural views may be eroded when adolescents engage in dating behaviors early in life. This may be because such behaviors break with traditional cultural expectations about romantic exploration (Raffaelli & Ontai, 2001).

Also, for more acculturated Latina girls (3rd-generation), perceiving their peers to have initiated sexual intercourse was associated with their own sexual intercourse initiation. This finding is in line with previous work that suggests peers play a stronger role in sexual intentions for U.S. born Latina/o youth (Killoren et al., 2011). Perhaps less acculturated Latinas are more resistant to negative peer influences (e.g., peer pressure and deviant-peer affiliations) than those more acculturated (Wall, Power, & Arbona, 1993), further supporting evidence of the immigrant paradox as a protective mechanism in this association. This may be further complicated by generational status differences in peer associations in that more acculturated youth may be more likely to associate with delinquent peers, as is the case for Chinese youth (Wong, 1999). Thus, erosion of protective factors associated with holding on to cultural heritage traditions among Latina/o youth appears to be reflected in decision-making processes.

Finally, generational status differences may suggest that how adolescents decide to have sexual intercourse differs according to their cultural experiences. Differences in decision-making strategies may be the result of greater adherence to traditional cultural views of sexual behavior among some groups, which, in turn, is a strong predictor of behaviors (Villar & Concha, 2012). Also, the consistent emphasis on attitudes regarding sexual intercourse initiation as a mediator in this association among most generational status groups may suggest that cultural conflicts often experienced among many Latino children are most reflected in attitudes (e.g., Villarruel, 1998). That is, as Latino children navigate the often-opposing views of traditional cultural views and norms of sexual and dating behaviors to that of the dominant U.S. culture (e.g., Roysircar-Sodowsky & Maestas, 2000), their development of attitudes toward dating and sex may be most influenced by these experiences. Thus, our model results suggest a nuanced process of sexual decision-making influenced by early dating behaviors and acculturative processes.

Limitations

Foremost, the observational (though longitudinal) design did not allow us to establish causal links between variables. Also, because 7th grade observed variables were not measured at 5th grade we could not account for changes across time in decision-making processes. Generational status was measured without consideration for migration status of a second parent (as only the migration status of the primary caregiver was measured), nor time in the U.S. (or age of arrival) for either child or parent. These parameters can vary considerably with differential effects (Coll & Marks, 2012). Also, age of sexual intercourse initiation was not measured with the traditional cut-off score of early sex initiation (Zimmer-Gembeck, & Helfand, 2008). Measures of intentions, perceived peer norms, and attitudes relied on references of vaginal intercourse only; thus, we were unable to address the comprehensive influence of these sexual decision-making processes in regard to oral and anal sex. Last, our measurement of parent-child sex communication did not differentiate between mother and father communication, as it was necessary to combine these to provide a good model fit.

Future Research

Despite adolescents' diverse sexual experiences, which can include oral and anal intercourse, most studies to date have focused only on vaginal intercourse. Among other disadvantages, this narrow focus has limited our understanding of initiation among adolescents who identify as gay, lesbian, or bisexual. We attempted to bridge this gap by examining sexual initiation across oral, vaginal, and anal sex. However, we were unable to specifically examine differences in associations across sexual orientation. Future research should endeavor to do so.

Moreover, parent-child communication about dating behaviors can influence adolescents dating behaviors (Reeb, 2009). Our findings advance this link by establishing the influence of pre-adolescent dating behaviors on subsequent sexual intercourse initiation. However, our study did not examine parent-child communication specifically about dating behaviors. Future research should explore how and when parents discuss dating behaviors with their children, as well as the longitudinal association of these factors to subsequent adolescent sexual behaviors.

Finally, discussions about sex may differ depending on gender composition of parent-child dyads. In fact, our descriptive results demonstrate that mothers discussed sex topics at a higher prevalence than did fathers. Also, communication may differ between two-parent and single-parent families. Future studies should explore how single-parent households address sex discussions with their children and how opposite gender parent-child dyads may confound this.

Implications

Dating behaviors become important in shaping subsequent sexual intercourse initiation by apparently influencing sex-related attitudes as early as pre-adolescence, particularly among Latino boys and less acculturated Latina girls. Once replicated, these findings may guide family-level prevention strategies aimed at delaying sexual intercourse initiation among Latina/o youth. Specifically, Latino parents need guidance in strategies to discuss dating and sexual behaviors with their pre-adolescent children, as dating behaviors should be addressed early on in Latino families (even prior to 5th grade). This may be particularly important among less acculturated Latina girls, as demonstrated by our findings. Perhaps parents of 1st-generation Latina girls are not addressing, or are not even aware, of their daughters dating experiences. Furthermore, better communication regarding sex and dating may result in stronger family cohesion (Phillips-Salimi et al., 2014) and, in turn, positive health behaviors developing among Latina/o children.

Sexual risk prevention programs may be adapted to incorporate messaging of dating behaviors. Yet, prevention strategies must balance between respecting Latino parents' traditional values while also providing sufficiently informative guidance to their children for navigating sexual situations they may encounter in their dating relationships. Most importantly, these behaviors should be addressed prior to 5th grade, which appears to be a critical period of dating initiation for Latina/o youth. Also, programs that focus on attitudes may be best at reaching a larger group of Latina/o youth and being most effective at delaying sex initiation. For example, *¡Cuídate!*, a culturally-based program for Latina/o youth that helps them develop, among other skills, attitudes to practice safe sex, has been successful (Villarruel, Jemmott, & Jemmott, 2006). In fact, because attitudes may be intertwined with culture for Latina/o youth, interventions should adopt culturally-based strategies. The influence of peers must also be considered, particularly among more acculturated youth. Debunking perceptions of peer behaviors, which tend to be over-estimated (Robinson, Teiljohann, & Price, 1999), may shed light on actual behaviors among peers and result in delaying sexual intercourse initiation. Multifaceted strategies that aim to address each decision-making process may also be successful for Latina/o youth who come from diverse acculturative experiences.

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Table 1. Descriptive characteristics for the overall sample (N = 1,764) and by gender and generational status.

	Overall	Latino Boys			Latina Girls		
		1st Gen.	2nd Gen.	3rd Gen.	1st Gen.	2nd Gen.	3rd Gen.
[a]Parent-child sex communication (5th grade)							
Mom: How babies are made, *M (SD)*	1.91 (.74)	1.63 (.72)^{a1}	1.57 (.66)^{a1}	1.57 (.64)^{a1}	1.98 (.74)^{a2}	1.92 (.75)^{a,b2}	1.84 (.69)^{b2}
Mom: What is sex, *M (SD)*	1.67 (.76)	1.46 (.71)^{a1}	1.40 (.64)^{a1}	1.44 (.60)^{a1}	1.77 (.80)^{a2}	1.65 (.76)^{b2}	1.64 (.74)^{a2}
Mom: Wait to have sex, *M (SD)*	2.02 (.89)	1.85 (.86)^{a1}	1.78 (.86)^{a1}	1.70 (.81)^{a1}	2.11 (.86)^{a2}	2.03 (.90)^{a2}	1.90 (.88)^{b2}
Dad: How babies are made, *M (SD)*	1.35 (.60)	1.57 (.74)^{a1}	1.45 (.66)^{b1}	1.40 (.58)^{b1}	1.49 (.68)^{a1}	1.33 (.58)^{b2}	1.30 (.56)^{b1}
Dad: What is sex, *M (SD)*	1.30 (.58)	1.44 (.68)^{a1}	1.35 (.62)^{a,b1}	1.30 (.55)^{b1}	1.37 (.61)^{a1}	1.30 (.60)^{a,b1}	1.22 (.50)^{b1}
Dad: Wait to have sex, *M (SD)*	1.62 (.82)	1.78 (.86)^{a1}	1.66 (.82)^{a,b1}	1.58 (.77)^{b1}	1.76 (.82)^{a1}	1.63 (.83)^{b1}	1.48 (.76)^{c1}
Dating behaviors (5th grade)							
Held hands, %	20.2	27.6^{a1}	27.0^{a1}	28.6^{a1}	11.0^{a2}	12.3^{a2}	15.9^{a2}
Alone with bf/gf, %	13.2	16.7^{a1}	17.9^{a1}	22.6^{a1}	6.9^{a2}	5.9^{a2}	13.9^{b2}
Kissed on mouth, %	11.2	14.8^{a1}	12.5^{a1}	18.4^{a1}	7.8^{a2}	8.0^{a2}	9.4^{a2}
Said "I love you", %	17.4	22.7^{a1}	22.3^{a1}	28.2^{a1}	9.7^{a2}	10.8^{a2}	13.9^{a2}
Hands under clothes, %	1.5	0.0^{a1}	2.1^{a1}	2.1^{a1}	2.3^{a2}	0.8^{a2}	2.4^{a1}
[b]Peer norms (7th grade), %	23.7	29.6^{a,b1}	23.6^{a1}	31.6^{b1}	17.9^{a2}	20.5^{a1}	26.0^{a1}
[c]Attitudes (7th grade)							
Sex with casual friend, *M* (*SD*)	1.80 (.91)	2.19 (1.03)^{a1}	2.07 (1.0)^{a1}	2.07 (.94)^{a1}	1.47 (.74)^{a2}	1.52 (.73)^{a2}	1.55 (.73)^{a2}
Sex with bf/gf, *M* (*SD*)	1.89(.95)	2.24 (1.07)^{a1}	2.08 (.98)^{a,b1}	2.04 (.93)^{b1}	1.55 (.83)^{a2}	1.71 (.87)^{b2}	1.70 (.86)^{a2}
Sex acceptable with condom, *M* (*SD*)	2.10 (1.03)	2.37 (1.08)^{a1}	2.31 (1.01)^{a1}	2.34 (1.02)^{a1}	1.81 (1.0)^{a,b2}	1.96 (1.0)^{b2}	1.74 (.89)^{a2}
Sex acceptable in love, *M* (*SD*)	1.97 (.97)	2.23 (1.07)^{a1}	2.18 (1.01)^{a1}	2.22 (.95)^{a1}	1.72 (.89)^{a,b2}	1.80 (.90)^{b2}	1.63 (.82)^{a2}
Sex acceptable if older than 18, *M* (*SD*)	2.43 (.95)	2.59 (.98)^{a1}	2.59 (.92)^{a1}	2.65 (.94)^{a1}	2.17 (.87)^{a2}	2.28 (.93)^{a2}	2.26 (1.0)^{a2}
[d]Intentions (7th grade), *M* (*SD*)	1.55 (0.96)	1.90 (0.96)^{a1}	1.79 (0.93)^{a1}	1.72 (1.02)^{a1}	1.04 (.87)^{a2}	1.26 (.86)^{b2}	1.42 (.88)^{b2}
[e]Household income, Mdn, $	<25k/yr	<25k/yr	<25k/yr	25k/yr−35k/yr	<25k/yr	<25k/yr	25k/yr−35k/yr
[e]Age (5th grade), *M (SD)*	11.12 (.61)	11.28 (.75)^{a1}	11.08 (.60)^{b1}	11.20 (.59)^{a1}	11.20 (.66)^{a1}	11.07 (.55)^{b1}	11.08 (.55)^{b2}
[e]Age (10th grade), *M (SD)*	16.06 (.62)	16.17 (.81)^{a1}	16.04 (.62)^{b1}	16.14 (.58)^{a1}	16.17 (.70)^{a1}	15.97 (.53)^{b2}	16.06 (.57)^{a1}
[e]Two-Parent household, %	51.2	58.1^{a1}	56.4^{a1}	36.3^{b1}	53.7^{a1}	54.8^{a1}	33.9^{b1}

Gen. = generational status; k = thousand; yr = year; bf/gf = boyfriend/girlfriend.

Superscript letters across rows represent significant differences across generational status within gender. Superscript numbers across rows represent significant differences between gender within generational status. Prevalence reported represent weighted percentages.

[a]Range = 1-3.

[b]Peer norms of vaginal intercourse (VI) initiation indicate the percentage who reported at least 1 friend to have initiated sex at 7th grade.

[c]Range = 1-4.

[d]Range = 0-3.

[e]Control variables. Household income and parental composition based on 5th grade report.

Table 2. Prevalence of sexual intercourse (oral, vaginal, and anal) initiation by demographic and categorical predictors.

	Overall sample (%)	**Latino Boys (%)**	**Latina Girls (%)**
[a]**Overall sexual initiation**	33.1	39.3	27.0
Oral sex initiation	26.8	34.5	19.2
Vaginal sex initiation	26.4	31.3	21.5
Anal sex initiation	9.7	13.3	6.1
Generational status	**χ^2 (2) = 8.10 (*p*=.02)**	χ^2 (2) = 1.48 (*p*=.47)	**χ^2 (2) = 9.44 (*p*=.01)**
First	29.8[a]	36.5[a]	23.5[a]
Second	32.3[a,b]	39.2[a]	25.3[a]
Third	38.2[b]	42.1[a]	34.6[b]
Parent composition	**χ^2 (1) = 30.05 (*p*=.000)**	**χ^2 (1) = 24.66 (*p*=.000)**	**χ^2 (1) = 8.83 (*p*=.003)**
Two-parent house	27.8[a]	32.4[a]	23.0[a]
Other	38.7[b]	46.9[b]	30.9[b]
Dating behaviors			
Held hands	**χ^2 (1) = 110.54 (*p*=.000)**	**χ^2 (1) = 70.86 (*p*=.000)**	**χ^2 (1) = 21.05 (*p*=.000)**
Yes	53.9[a]	59.3[a]	42.8[a]
No	27.8[b]	31.7[b]	24.6[b]
Alone with bf/gf	**χ^2 (1) = 79.97 (*p*=.000)**	**χ^2 (1) = 60.08 (*p*=.000)**	**χ^2 (1) = 6.59 (*p*=.01)**
Yes	55.9[a]	60.6[a]	38.6[a]
No	29.7[b]	34.7[b]	26.0[b]
Kissed on mouth	**χ^2 (1) = 74.88 (*p*=.000)**	**χ^2 (1) = 68.16 (*p*=.000)**	**χ^2 (1) = 5.07 (*p*=.02)**
Yes	57.4[a]	69.0[a]	37.0[a]
No	30.1[b]	34.4[b]	26.1[b]
Said "I love you"	**χ^2 (1) = 105.95 (*p*=.000)**	**χ^2 (1) = 72.57 (*p*=.000)**	**χ^2 (1) = 17.56 (*p*=.000)**
Yes	55.4[a]	61.7[a]	42.5[a]
No	28.4[b]	32.4[b]	25.0[b]
Hands under clothes	**χ^2 (1) = 15.56 (*p*=.000)**	**χ^2 (1) = 9.58 (*p*=.002)**	**χ^2 (1) = 5.36 (*p*=.02)**
Yes	64.7[a]	73.7[a]	53.3[a]
No	32.6[b]	38.7[b]	26.6[b]
[b]**Peer norms of sex initiation**	**χ^2 (1) = 269.02 (*p*=.000)**	**χ^2 (1) = 188.72 (*p*=.000)**	**χ^2 (1) = 75.39 (*p*=.000)**
None	24.0[a]	27.7[a]	21.0[a]
1 or more	62.3[b]	72.9[b]	21.0[b]

Note: Prevalences reported for demographic and categorical predictor variables represent overall (combined oral, vaginal, and anal) sex initiators as weighted percentages. Bold chi-square represents significant group differences.

[a]Sex initiation as reported by 10th grade.

[b]Peer norms of vaginal intercourse (VI) initiation indicate the percentage who reported at least 1 friend to have initiated sex at 7th grade.

Table 3. Correlations, means, standard deviations of observed variables, and standardized factor loadings and residuals of the measurement model.

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
1	1	.29	-.03	-.01	-.14	-.03	-.01	-.05	-.08	-.07	-.08	.01	.05	.04	.04	.05	.02	-.04	-.06	-.01	-.01	.02	-.06	.04
2	.31	1	-.05	-.05	.20	.01	.01	-.10	-.03	.01	-.12	-.04	-.03	-.08	-.02	-.03	-.03	-.05	-.06	-.07	-.05	-.04	.03	-.05
3	-.07	-.11	1	.83	-.16	-.05	-.02	-.03	-.01	-.01	-.01	.10	.05	.13	.12	-.02	.19	.20	.14	.25	.22	.14	-.03	.11
4	-.05	-.08	.79	1	-.14	-.01	-.02	-.01	.01	.02	-.01	.11	.05	.14	.13	.02	.27	.19	.15	.24	.21	.14	-.02	.23
5	-.13	.06	-.13	-.10	1	.05	.03	.02	.03	.10	.02	-.12	-.11	-.10	-.12	-.01	-.10	-.15	-.11	-14	-.15	-.09	.01	-.15
6	-.06	-.09	.01	-.02	.04	1	.56	.36	.56	.44	.28	.06	.01	.04	.02	.03	.01	.12	.11	.14	.13	.12	.05	.01
7	-.05	-.06	.07	.01	-.02	.62	1	.46	.51	.61	.40	.14	.10	.05	.08	.01	-.01	.14	.02	.11	.09	.12	.15	.06
8	-.08	-.09	.08	.04	-.04	.45	.55	1	.37	.39	.70	.12	.05	.09	.05	-.05	.08	.06	.00	.06	.02	.02	-.02	.10
9	-.10	-.07	.02	.02	.06	.46	.45	.32	1	.62	.41	.14	.10	.08	.10	.02	.06	.14	.11	.14	.14	.12	.06	.05
10	-.08	-.08	-.01	-.01	.03	.38	.52	.36	.64	1	.49	.15	.12	.13	.09	.03	.04	.11	.06	.07	.10	.09	.02	.05
11	-.11	-.06	.03	-.02	.09	.35	.42	.57	.47	.55	1	.14	.06	.09	.09	.01	.10	.07	.05	.11	.05	.04	-.04	.11
12	.05	.01	.20	.19	-.09	.08	.13	.08	.01	.05	.07	1	.54	.46	.59	.11	.25	.27	.23	.27	.27	.22	.01	.25
13	.09	.02	.13	.17	-.07	.03	.03	-.01	-.02	.03	-.02	.56	1	.45	.51	.15	.21	.26	.20	.20	.24	.19	.02	.23
14	.02	.02	.15	.13	-.04	.04	.09	.08	.03	.02	.05	.39	.47	1	.45	.22	.29	.28	.22	.25	.28	.20	.01	.25
15	.04	-.02	.15	.13	-.04	.08	.09	.05	.03	.03	.04	.62	.45	.40	1	.15	.23	.25	.20	.23	.26	.18	.01	.25
16	.01	.02	-.01	.02	-.01	.05	.03	.02	-.03	.03	.02	.20	.25	.19	.21	1	.10	.12	.11	.13	.10	.07	-.02	.09
17	.07	.01	.20	.26	-.11	.10	.09	.09	.11	.01	.09	.24	.15	.18	.22	.07	1	.45	.39	.43	.46	.37	.04	.41
18	.03	-.02	.17	.17	-.08	.04	.02	.05	.07	.02	.03	.18	.18	.09	.12	.02	.32	1	.59	.62	.66	.52	.12	.34
19	.05	-.02	.17	.17	.01	.04	.05	.04	.07	.05	.04	.15	.12	.10	.12	.01	.26	.53	1	.65	.68	.49	.04	.30
20	-.03	-.04	.23	.23	-.06	.02	.02	.04	.05	.01	.01	.21	.13	.07	.17	.04	.38	.54	.58	1	.75	.52	.12	.36
21	-.04	-.07	.21	.22	-.05	.04	.03	.03	.09	.02	.02	.22	.17	.09	.20	.05	.37	.53	.56	.74	1	.57	.07	.36
22	.03	.05	.17	.14	-.10	.03	.04	-.01	.02	-.01	.03	.19	.13	.13	.17	.07	.32	.38	.36	.48	.46	1	.16	.35
23	-.06	.03	-.03	-.02	.01	.05	.15	-.02	.06	.02	-.04	.01	.02	.01	.01	-.02	.04	.12	.04	.12	.07	.16	1	.16
24	.08	.00	.16	.24	-.09	.04	.10	.07	.06	.05	.03	.14	.08	.07	.13	.07	.26	.24	.17	.23	.21	.20	.16	1
[+]M	2.03	2.04	10.65	16.08	0.52	1.58	1.42	1.77	1.46	1.36	1.66	0.27	0.19	0.14	0.24	0.02	0.26	2.09	2.10	2.33	2.20	2.60	1.79	0.39
SD	.63	1.65	.68	.65	.50	.67	.64	.85	.66	.62	.81	.45	.39	.35	.42	.13	.44	.99	.99	1.03	1.01	.94	.96	.49
[+]L	—	—[a]	—[a]	—[a]	—[a]	[.73	.81	.86	.81	.86	.84][b]	[.98	.85	.84	.85	.85][c]	—[e]	[.81	.83	.87	.91	.71][d]	—[e]	—[e]
SE	—	—	—	—	—	.02	.02	.02	.02	.02	.01	.03	.02	.03	.02	.02	—[e]	.01	.01	.01	.01	.02	—[e]	—[e]
[++]M	2.02	1.93	10.60	16.03	0.50	1.91	1.67	2.02	1.35	1.30	1.62	0.13	0.08	0.08	0.11	0.01	0.21	1.52	1.67	1.88	1.75	2.26	1.26	0.27
SD	.64	1.61	.64	.58	.50	.74	.76	.89	.60	.58	.82	.33	.27	.27	.32	.12	.41	.73	.86	.98	.88	.93	.87	.44
[++]L	—	—[a]	—[a]	—[a]	—[a]	[.76	.86	.82	.82	.90	.81][b]	[.96	.89	.78	.91	.63][c]	—[e]	.76	.79	.90	.89	.63	—[e]	—[e]
SE	—	—	—	—	—	.02	.02	.02	.02	.03	.02	.03	.03	.04	.03	.06	—[e]	.02	.02	.01	.01	.02	—[e]	—[e]

Note: M = mean; SD = standard deviation; SE = standard error; L = Loading.
Correlations for girls (n = 879) are to the bottom and left of the diagonal. Correlations for boys (n = 885) are to the right and above the diagonal. All correlations ≥ .06, $p < .05$; ≥ .08, $p < .01$.
[+]Descriptives and standardized factor loadings for boys; [++]Descriptives and standardized factor loadings for girls.
1 = generational status; 2 = household income; 3 = Age at 5th grade; 4 = Age at 10th grade; 5 = parent household composition; 6 = Mom – how babies are made; 7 = Mom – what is sex; 8 = Mom – wait to have sex; 9 = Dad – how babies are made; 10 = Dad – what is sex; 11 = Dad – wait to have sex; 12 = held hands; 13 = alone with bf/gf; 14 = kissed on mouth; 15 = said "I love you"; 16 = hands under clothes; 17 = peer norms; 18 = sex with casual friend; 19 = sex with bf/gf; 20 = sex acceptable with condom; 21 = sex acceptable in love; 22 = sex acceptable if older than 18 years old; 23 = intentions; 24 = sexual intercourse initiation.
[a]Control variables.
[b]Standardized loadings for *parent-child sex communication* latent factor.
[c]Standardized loadings for *dating behaviors* latent factor.
[d]Standardized loadings for *attitudes* latent factor.
[e]Categorical items in structural model which do not provide loadings.

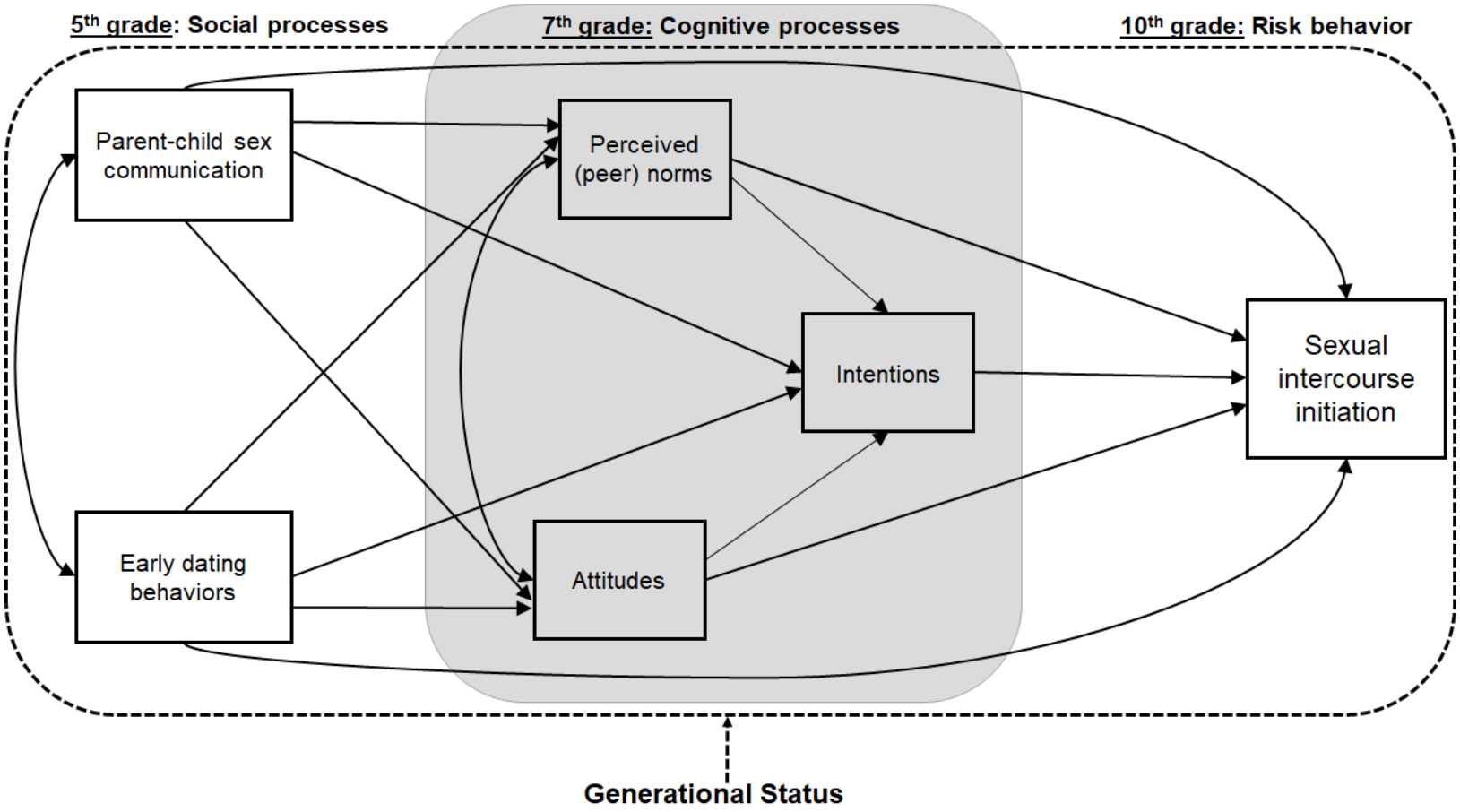

Figure 1. Conceptual hypothesized model.

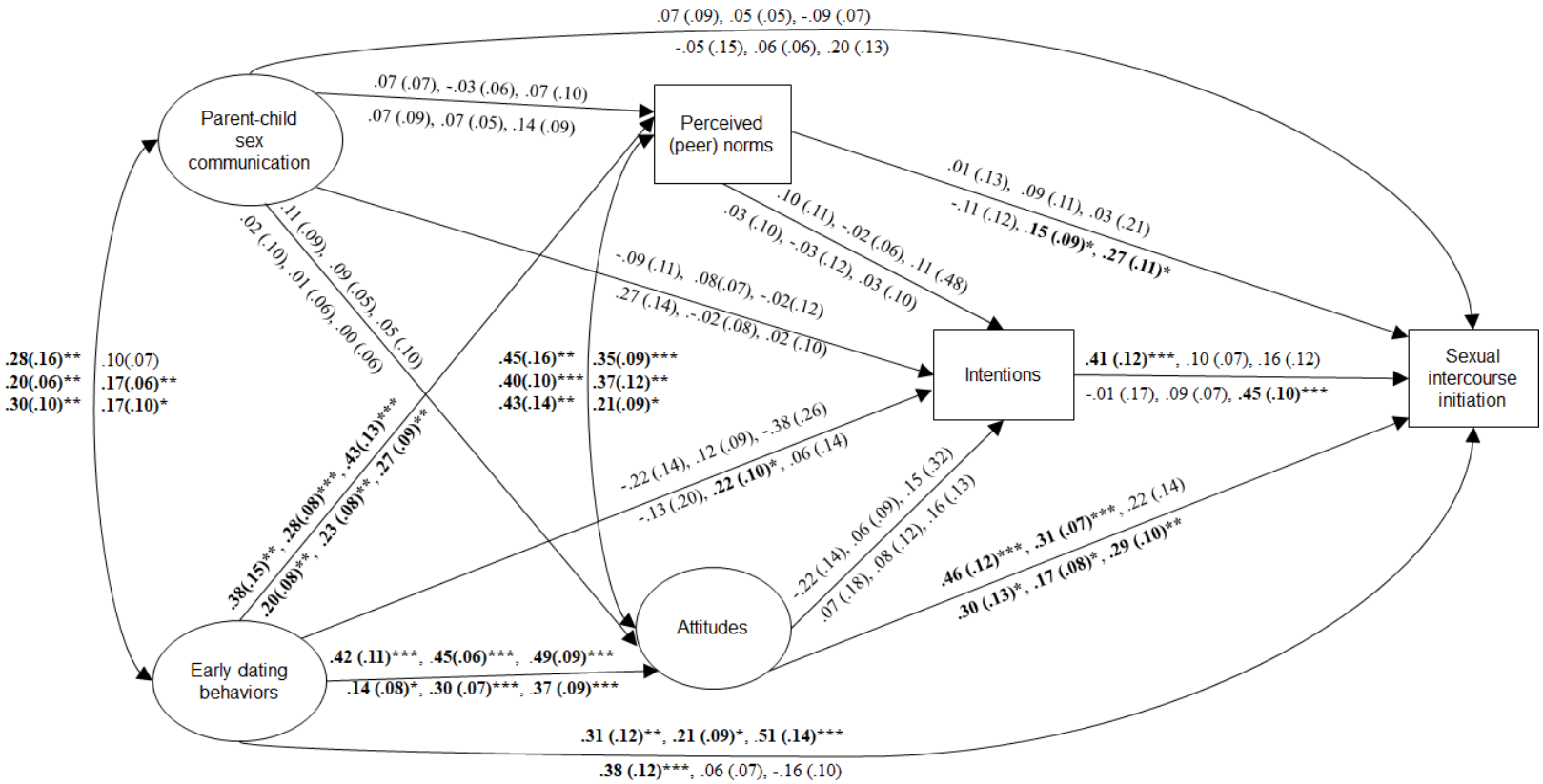

Figure 2. Standardized path coefficients (standard errors) for the partially constrained structural model across generational status groups. Path coefficients for 1st–, 2nd–, and 3rd–generation status groups are presented in that order. Path coefficients above or to the right of paths represent results for Latino boys. Path coefficients below or to the left of paths represent results for Latina girls. Age at grade, household income, and parental household composition were controlled for on the exogenous and outcome variables. Factor loadings and residuals of the measurement model are provided in Table 3. Bold indicates significant coefficients. $*p < .05$, $**p < .01$, $***p < .001$.